a transseptal cannula adapted to be inserted percutaneously in the femoral vein and extend through the atrial septum from the right atrium to the left atrium;

B1

an extracorporeal blood pump mechanism having a blood pump for pumping blood received from the left atrium through the transseptal cannula that has been oxygenated, the blood pump inlet connected to the transseptal cannula, the blood pump mechanism includes a transseptal clamp mechanism which clamps the blood pump to the transseptal cannula to avoid undesired disconnection of the blood pump and the transseptal cannula and undesired leaks in a connection joint formed between the blood pump and the transseptal cannula; and

a perfusion cannula adapted to be inserted percutaneously in the femoral artery for returning oxygenated blood to the arterial system of the patient, the perfusion cannula connected to the blood pump outlet, the blood pump disposed within three feet of where the transseptal cannula and the perfusion cannula are positioned to enter the patient.

Cancel Claims 2 and 3.

B2

4. A system as described in Claim 1 wherein the blood pump mechanism includes tubing which connects the blood pump to the transseptal cannula and the perfusion

B2 cannula and the clamp mechanism clamps the tubing between the blood pump and the transseptal cannula.

22. A system as described in Claim 20 wherein the pump is a pulsatile pump

B3 having a stroke time, and the controller adjusts the operation of the blood pump by adjusting stroke time.

29. A method for assisting blood flow by a patient's heart comprising the steps of:

B4 inserting percutaneously in the femoral vein of the patient and extending through the atrial septum from the right atrium to the left atrium a transseptal cannula;

inserting percutaneously in the femoral artery a perfusion cannula for returning oxygenated blood to the arterial system of the patient;

positioning a blood pump within three feet of where the transseptal cannula and the perfusion cannula are inserted into the patient;

clamping a transseptal clamp mechanism to the transseptal cannula and the blood pump to avoid undesired disconnection of the blood pump and the transseptal cannula and undesired leaks at a connection joint formed between the blood pump and the transseptal cannula; and

B4

pumping blood with the blood pump connected to the transseptal cannula and the perfusion cannula at specified flow rates over a range of physiological pressures.

Cancel Claims 30, 31, 43, 46 and 47.

B5

32. A method as described in Claim 29 wherein the pumping step includes the step of pumping a continuous flow of blood with the blood pump.

Please add the following claim.

52. A system for assisting flow of blood by a patient's heart comprising:

B6

a transseptal cannula adapted to be inserted percutaneously in a vein and extend through the atrial septum from the right atrium to the left atrium;

an extracorporeal blood pump mechanism having a blood pump for pumping blood received from the left atrium through the transseptal cannula that has been oxygenated, the blood pump inlet connected to the transseptal cannula;

B6

a controller connected to the blood pump through which the operation of the blood pump speed is adjusted; and

a perfusion cannula adapted to be inserted percutaneously in an artery for returning oxygenated blood to the arterial system of the patient, the perfusion cannula connected to the blood pump outlet, the extracorporeal blood pump is disposed within three feet of where the transseptal cannula and the output cannula are positioned to enter the patient.